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Indian Standard

SPECIFICATION FOR POLYPROPYLENE FILTER CLOTH

PART 1 FILTER CLOTH FROM SPUN POLYPROPYLENE YARN

UDC 677·494·742·3·064 : 66 067·332

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

Gr 2

November 1987

Indian Standard

SPECIFICATION FOR POLYPROPYLENE FILTER CLOTH

PART 1 FILTER CLOTH FROM SPUN POLYPROPYLENE YARN

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(*Continued on page* 2)

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Indian Standard

SPECIFICATION FOR POLYPROPYLENE FILTER CLOTH

PART 1 FILTER CLOTH FROM SPUN POLYPROPYLENE YARN

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 6 March 1987, after the draft finalized by the Industrial Textiles Sectional Committee had been approved by the Textile Division Council.

0.2 Polypropylene filter cloths are increasingly being used by various industries like petrolium, chemical, pharmaceutical, smelters and for wet filtration in the country due to the inherent qualities of polypropylene material. The present standard has been prepared with a view to regulate the quality of such fabrics.

0.3 Part 1 covers filter cloths from spun polypropylene yarn. Filter cloths from multifilament and multifilament/spun yarn will be covered in Part 2 and Part 3 of this specification.

0.4 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements of six varieties of polypropylene filter cloth made from spun yarn.

2. MANUFACTURE

2.1 Yarn — The yarn used for the manufacture of filter cloth shall be spun polypropylene yarn. The identification of polypropylene spun yarn may be done as per IS : 667-1981†.

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*Rules for rounding off numerical values (*revised*).

†Methods for identification of textile fibres (*first revision*).

2.2 Cloth — The filter cloth when visually examined, shall be reasonably free from weaving and other processing defects.

2.3 The filter cloth shall be heat set to obtain dimensional stability.

3. REQUIREMENTS

3.1 The filter cloth shall comply with the requirements of Table 1.

TABLE 1 REQUIREMENTS OF POLYPROPYLENE FILTER CLOTH MADE FROM SPUN YARN

Variety No.	Ends per dm	Picks per dm	Mass	Breaking Strength on 5 × 20 cm Strip, *Min*		Thickness	Air Permeability	Dimensional Changes on Washing (in Boiling Water)	Weave
				Warp	Weft				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			g/m²	N	N	mm	$cm^3/cm^2/s$		
1	200	135	200	1 095	795	0·60	15	± 2 percent in both length and width directions	2/2 Twill
2	225	170	265	1 390	1 145	0·70	8		,,
3	300	150	410	2 550	1 270	0·98	2·5		,,
4	235	105	420	3 085	1 225	1·35	3·5		
5	220	100	450	2 980	1 320	1·20	3		,,
									,,
6	380	125	580	3 525	1 380	1·30	2·5		,,
Tolerance	±2·5 percent	±5 percent	+5 −2·5 percent	—		±0·05	±1·5	—	—
Method of Test	IS: 1963-1981*		IS : 1964-1970†	IS : 1969-1985‡		IS : 7702-1975§	IS : 11056 1984‖	IS : 1299-1984¶	Visual

NOTE — 1 N = 0·102 kgf approximately.

*Method for determination of threads per unit length in woven fabrics.

†Methods for determination of weight per square metre and weight per linear metre of fabrics (*first revision*).

‡Methods for determination of breaking load and elongation of woven textile fabrics (*second revision*).

§Method for determination of thickness of woven and knitted fabrics.

‖Method for determination of air permeability of fabrics.

¶Method for determination of dimensional changes on washing of fabrics woven from rayon and synthetic fibres (*second revision*).

3.2 The length and width of the filter cloth shall be agreed to between the buyer and the seller subject to following tolerances when tested by the method shown against these.

Characteristic	*Tolerances*	*Method of Test*
Length	+2·0 percent −1·0 percent	IS : 1954-1969*
Width	±1·0 percent subject to a minimum of 1 cm in each direction	do

4. MARKING

4.1 The filter cloth shall be marked with the following:

a) Name of the material;
b) Variety number'
c) Width and length of the piece;
d) Manufacturer's name, initials or trade-mark, if any; and
e) Month and year of manufacture.

4.1.1 The filter cloth may also be marked with the Standard Mark.

NOTE — The use of the Standard Mark is governed by the provisions of the Bureau of Indian Standards Act, 1986 and the Rules and Regulations made thereunder. The Standard Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirements of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by BIS and operated by the producer. Standard marked products are also continuously checked by BIS for conformity to that standard as a further safeguard. Details of conditions, under which a licence for the use of the Standard Mark may be granted to manufacturers or producers, may be obtained from the Bureau of Indian Standards.

4.2 At both the ends of the piece, the filter cloth shall be marked with variety number and manufacturer's trade or code mark.

5. PACKING

5.1 The filter cloth shall be packed in bales or cases in conformity with the procedures laid down in IS : 1347-1972† or IS : 293-1980‡ as required.

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*Method for determination of length and width of fabrics (*first revision*).

†Specification for inland packaging of cotton cloth and yarn (*first revision*).

‡Code for seaworthy packaging of cotton yarn and cloth (*third revision*).

6. SAMPLING

6.1 For ends per dm; picks per dm, mass per square metre, length, width, thickness, air permeablity (*see* Note) and breaking strength tests the sampling and criteria for conformity procedures as laid down in IS : 3919-1966* shall be followed.

NOTE — For air permeability test, the sampling and criteria for conformity procedures as laid down in IS : 3919-1966* for breaking load test shall be followed.

6.2 For dimensional changes on washing, the sampling and criteria for conformity procedures as laid down in IS : 5463-1969† shall be followed.

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*Methods for sampling of cotton fabrics for determination of physical characteristics.

†Methods for sampling of cotton fabrics for chemical tests.

AMENDMENT NO. 1 JUNE 1990
TO
IS 12020 (Part 1) : 1987 SPECIFICATION FOR POLYPROPYLENE FILTER CLOTH

PART 1 FILTER CLOTH FROM SPUN POLYPROPYLENE YARN

[This Amendment is being issued to include five additional varieties of polypropylene filter cloth made from spun polypropylene yarn, which have wider acceptance by the users.]

(*Page* 3, *clause* 1.1) — Substitute 'eleven varieties' *for* 'six varieties'.

(*Page* 4, *Table* 1) — Substitute the table given on page 2 for the existing table:

TABLE 1 REQUIREMENTS OF POLYPROPYLENE FILTER CLOTH MADE FROM SPUN YARN

(*Clause* 3.1)

VARIETY NUMBER	ENDS/ dm	PICKS/ dm	MASS	BREAKING STRENGTH ON 5×20 cm STRIP, *Min*		THICKNESS	AIR PERMEABILITY	DIMENSIONAL CHANGES ON WASHING IN BOILING WATER	WEAVE
				Warp	Weft				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
			g/m^2	N	N	mm	$m^3/cm^2/s$		
1	200	135	200	1 100	800	0·60	15	± 2 per-cent in both directions	2/2 Twill
2	225	170	265	1 400	1 150	0·70	8		2/2 Twill
3	175	110	380	2 700	1 325	1·10	22		2/2 Twill
4	300	150	410	2 550	1 275	1·10	2·5		2/2 Twill
5	235	105	420	3 075	1 225	1·35	3·5		2/2 Twill
6	355	130	420	3 375	1 200	1·10	7·5		2/2 Oxford Twill
7	220	100	450	2 975	1 325	1·20	3·0		2/2 Twill
8	265	120	510	3 650	1 700	1·20	2·5		2/2 Oxford Twill
9	380	125	580	3 525	1 375	1·30	2·5		2/2 Twill
10	270	110	600	3 225	2 000	1·45	4·0		2/2 Twill
11	210	90	670	4 800	2 100	1·50	4·5		2/2 Oxford Twill
Tolerance	±2·5 percent	±5 percent	+5 −2·5 percent	—	—	±0·05	±1·5	—	—
Method of test	IS 1963 : 1981*	IS 1964 : 1970†	IS 1969 : 1985‡			IS 7702 : 1975§	IS 11056 : 1984‖	IS 1299 : 1984¶	Visual

NOTE — 1 N = 0·102 kgf approximately.

*Methods for determination of threads per unit length in woven fabrics (*second revision*).

†Methods for determination of weight per square metre and weight per linear metre of fabrics (*first revision*).

‡Methods for determination of breaking load and elongation of woven textile fabrics (*second revision*).

§Method for determination of thickness of woven and knitted fabrics.

‖Method for determination of air permeability of fabrics.

¶Method for determination of dimensional changes on washing of fabrics woven from rayon and synthetic fibres (*second revision*).

(TXD 24)

Printed at Printwell Printers, Delhi India

AMENDMENT NO. 2 JUNE 1991

TO

IS 12020 (Part 1) : 1987 SPECIFICATION FOR POLYPROPYLENE FILTER CLOTH

PART 1 FILTER CLOTH FROM SPUN POLYPROPYLENE YARN

(*Amendment No.* 1 *June* 1990, *page* 2, *col* 8, units) — Substitute '$cm^3/cm^2/s$' *for* '$m^3/cm^2/s$'.

(TXD 24)

Reprography Unit, BIS, New Delhi, India